

A turning point for the area, which as early as in the 70s was covered with rainforest or a mosaic of rainforest and farmland were historically the largest wildfires in eastern Kalimantan (even in Borneo) at all. In 1982-83 large areas of East Kalimantan had been burned. The secondary forest that regrew here was by a local Indonesian government declared as a degraded landscape without any conservation values and ecological importance. That was obviously very wrong. However, it provided an opportunity to convert such secondary forest into oil palm plantations that stretch several kilometres northwards from here and still proceed further, because the mining concessions are being replaced by timber concessions. Every year, the plantations advance closer to the border of the reserve. It is expected that within a decade the forest will be completely surrounded by plantations, thereby forming an island of biodiversity, which will lead to the loss of rarer and larger species of plants and animals (such as orang-utans and clouded leopards) because remaining area will not be large enough to feed them and animals in one tiny population will not be able to meet with animals in others. It is exactly what happens here and in a number of other reserves. This problem is caused by oil palm or acacia plantations and is linked with another issue—the expanding paper industry.

#### What is palm oil used for?

Palm oil can be used in almost anything. It is said that 50 % of the products being sold in EU supermarkets contain palm oil. Among them are food products such as margarine, biscuits, wafers, candy, ice cream, ice lollies, cosmetic products such as shampoo, soap, fabric softener, and also industrial oils, lubricants and unfortunately currently very popular agrofuel, which represents a huge future threat for biodiversity. As long as palm oil is added to agrofuels (considered to be used in plane engines as well), it will mean even incomparably more pressure on the local landscape.

Thus, what is considered environmentally friendly agrodiesel for aircraft and other traffic comes from these places, which were some twenty, thirty years

ago pristine forest. It means large-scale devastation of the rainforest took place here. It is also necessary to say that in another twenty or thirty years, this country will be totally unproductive because soils in Kalimantan are very poor, so it is very unlikely that it will be possible to grow oil palm here for more than two cycles. Oil palm is very effective in terms of absorption of nutrients and water from the soil, which is why it actually thrives even in these unfertile fields. However, it has its toll and that's the fact that after twenty, thirty years when the trees die, the soil would be so depleted that almost nothing would grow there and this area would become unproductive grassland without any further use, except for a brown coal mine. In this manner, it will provide only a short-time profit before it becomes a barren wasteland.

## What does it mean for local people to have their village surrounded by oil palm plantations? And how land conversion to plantations happen in relation to traditional inhabitants land ownerships?

Roughly half of the land that is used for oil palm cultivation was formerly a forest land, the other half was an agricultural land used for various types of crops like rice, vegetables, fruit and rubber trees. These plantations were used by local villagers. The traditional way of farming represents a major drawback for them. They employ farming system when the field is left fallow for a few years before it is used again. The reason is that a crop usually exhausts nutrients in a few years. Therefore, the field is not used for several years and allowed to become overgrown by secondary forest before it is reused again. This farming system is not well grounded in Indonesian laws, so for a company that cultivates oil palm is very easy to seize agricultural land simply because it isn't actively used at that very moment.

### What does it mean for the area in terms of water, floods, fires and temperature?

When a region is deforested, the local temperature rises. It also means a loss of water, not only because of increased evaporation, but also because of a highly efficient sucking of groundwater by oil palm trees. Small rivers that drain plantations often dry out because oil palms suck water very effectively. So, in dry seasons that can last for several months, the rivers are dried-up. On the other hand, soil loses its ability to retain water, which means that when the rain comes, floods take place. Floods are currently becoming one of the most pressing problems of this area. Villages are usually built on river banks so when the river spills out every few months, the property losses of the villagers are quite high. There is hardly any other solution but to move entire villages somewhere else. Wildfires are another, a bit politicized, issue. Sometimes we hear that oil palm plantations represent the hope for the future, because they have trained teams of staff and equipment able to stop any forest fire. On one hand, it is true, but what is not said is that the plantations are the source of these fires, because there is a lot of workers using fire, smoking and throwing cigarette butts away. There are mainly grasses and herbs growing among oil palms and these are extremely flammable in dry seasons. Oil palm plantations represent a significant source of forest fires. When you look around here, you can see one small river with a few trees remained on its banks and nothing else. What we see (in the picture) would

normally be a swamp, because temporary swamps are widespread in this flat area of Kalimantan. Those places with rivers flowing through should in fact be forested, despite being located in oil palm plantations. The law says that each plantation must put aside part of its area as a protected conservation area. The riverbanks should be included in such areas. Different laws require the width of the forest along the river banks to be from 50 to 200 meters. What we see here is not even the minimum of 50 meters, let alone the optimal 200 metres. This area is likely to have the status of a conservation area and that means palms are not allowed to be grown here. In fact, this rule is not imposed. It's in any case almost irrelevant, because the studies have shown that these conservation areas within plantations are too small to be able to host more complex biodiversity and, therefore, are not able to reduce the negative impact of plantations, with regards to ecological functions of the land. Another major issue is water pollution that makes it essentially undrinkable. Plantations are regularly sprayed with herbicides to keep invasive grasses at bay. Pesticides and urea are intensively used, they all get into water and this one becomes poisonous to people and animals. There are even placed warning signs informing about the danger of poisoning because of the presence of pesticides in the water.

# What can an average person do against something like that? If someone disagrees with this kind of devastation, is there any chance of finding out which products are made from palm oil produced in this location and do something against it?

There is an EU regulation requiring clear labelling of an exact type of a vegetable oil used in food products. Such regulation gives us an ethical choice. We can decide if we prefer a product that contains palm oil, which entails huge losses in areas where it is produced, whether related to nature conservation and biodiversity or the loss connected with a sustainable economy of local people. Or we can buy the products with the oil, which was ecologically produced in a more sustainable manner and is in the best case locally produced. In Europe it means sunflower, rapeseed and olive oils or butter which has recently been almost forgotten. Palm oil is not a problem only in Borneo. Currently, the most affected area is the Southeast Asian region, with Borneo and Sumatra being hit worst. Plantations still spread further and further. As the suitable land has become unavailable, mainly Malaysian companies are beginning to expand beyond Asia right now. Oil palm plantations are spreading in Africa, where the plant originated, and in South America. Environmental disaster that is happening now in Southeast Asia can be expected in tropical Africa and South America too. The pressure on tropical rainforests will be historically unprecedented. It already is historically unprecedented!

#### What is the impact of Czech people or other Europeans on this country?

The impact of the Europeans is likely to be greater than ever before. Even if we look at the 60's or 70's, when Indonesia exported a lot of tropical wood, not even then was the impact of an average European in Southeast Asia by far as negative as it is today due to the consumption of palm oil.

Source: Alexandr Pospech and Stanislav Lhota. Palm oil - a piece of forest in our homes. In: Youtube [online]. June 15, 2013, act. and edit. Oct 15, 2015. Available from: https://www.youtube.com/watch?t=6&v=wQBgUJhkPyE



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